

## SAVAHCS Infection Control Risk Assessment Matrix of Precautions for Construction & Renovation

**Project:** GRC Showers, Phase II **Date:** May 4, 2009

**Step One:** Using the following table, *identify* the Type of Construction Project Activity

<b>TYPE A</b>	<b>Inspection and Non-Invasive Activities.</b> Includes, but is not limited to: <ul style="list-style-type: none"><li>• Removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet</li><li>• Painting (but not sanding)</li><li>• Wallcovering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.</li></ul>
<b>TYPE B</b>	<b>Small scale, short duration activities which create minimal dust</b> Includes, but is not limited to: <ul style="list-style-type: none"><li>• Installation of telephone and computer cabling</li><li>• Access to chase spaces</li><li>• Cutting of walls or ceiling where dust migration can be controlled.</li></ul>
<b>TYPE C</b>	<b>Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies</b> Includes, but is not limited to: <ul style="list-style-type: none"><li>• Sanding of walls for painting or wall covering</li><li>• Removal of floor coverings, ceiling tiles and case work</li><li>• New wall construction</li><li>• Minor duct work or electrical work above ceilings</li><li>• Major cabling activities</li><li>• Any activity which cannot be completed within a single work shift.</li></ul>
<b>TYPE D</b>	<b>Major demolition and construction projects</b> Includes, but is not limited to: <ul style="list-style-type: none"><li>• Activities which require consecutive work shifts</li><li>• Requires heavy demolition or removal of a complete cabling system</li><li>• New construction.</li></ul>

**Step 1:** TYPE D

## Step Two:

Using the following table, *identify the Patient Risk Groups* that will be affected.

If more than one risk group will be affected, select the higher risk group:

Low Risk	Medium Risk	High Risk	Highest Risk
<ul style="list-style-type: none"> <li>Office areas</li> </ul>	<ul style="list-style-type: none"> <li>Cardiology</li> <li>Echocardiography</li> <li>Endoscopy</li> <li>Nuclear Medicine</li> <li>Physical Therapy</li> <li>Radiology/MRI</li> <li>Outpatient Clinics</li> </ul>	<ul style="list-style-type: none"> <li>Life Support Unit (LSU)</li> <li>Clinical Laboratories</li> <li>Pharmacy</li> <li>Outpatient Surgery</li> <li>Post Anesthesia Care Unit (PACU)</li> <li>Surgical Unit 2 South</li> <li>Respiratory Therapy / Bronchoscopy Suite</li> </ul>	<ul style="list-style-type: none"> <li>Any area caring for immunocompromised patients</li> <li>Cardiac Cath and Special Procedures Labs</li> <li>Supply, Processing and Distribution (SPD)</li> <li>Intensive Care Units</li> <li>Medical Units – 3 North, 3 East</li> <li>Geriatric Extended Care Inpatient Units</li> <li>Oncology Clinic 1 South</li> <li>Negative pressure isolation rooms</li> <li>Operating rooms</li> </ul>

Step Two: Highest Risk

**Step Three:** *Match* the following and determine class of precaution:

Patient Risk Group (*Low, Medium, High, Highest*) with the planned ...  
Construction Project Type (*A, B, C, D*) on the following matrix, to find the ...  
Class of Precautions (*I, II, III or IV*) or level of infection control activities required.

Class I-IV or Color-Coded Precautions are delineated on the following page.

**IC Matrix - Class of Precautions: Construction Project by Patient Risk  
Construction Project Type**

Patient Risk Group	TYPE A	TYPE B	TYPE C	TYPE D
LOW Risk Group	I	II	II	III/IV
MEDIUM Risk Group	I	II	III	IV
HIGH Risk Group	I	II	III/IV	IV
HIGHEST Risk Group	II	III/IV	III/IV	IV

**Note:** (1) Infection Control approval will be required when the Construction Activity and Risk Level indicate that Class III or Class IV control procedures is necessary.

(2) Class of Precautions is the maximum level required . Construction Activity within a given project will vary dependent on construction phase i.e., excavation, demolition, early construction, end-stage construction. **Precautions required may vary** within a given project in accordance with type of current construction activity.

**Step Three:** Class IV

## Description of Required Infection Control Precautions by Class

	During Construction Project	Upon Completion of Project
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CLASS I	<ol style="list-style-type: none"> <li>1. Execute work by methods to minimize raising dust from construction operations.</li> <li>2. Immediately replace a ceiling tile displaced for visual inspection.</li> </ol>	
CLASS II	<ol style="list-style-type: none"> <li>1. Provide active means to prevent airborne dust from dispersing into atmosphere.</li> <li>2. Water mist work surfaces to control dust while cutting.</li> <li>3. Seal unused doors with duct tape.</li> <li>4. Block off and seal air vents.</li> <li>5. Place dust mat at entrance and exit of work area.</li> <li>6. Remove or isolate HVAC system in areas where work is being performed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wipe work surfaces with disinfectant.</li> <li>2. Contain construction waste before transport in tightly covered containers.</li> <li>3. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area.</li> <li>4. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>
CLASS III	<ol style="list-style-type: none"> <li>1. Remove or isolate HVAC system in area where work is being done to prevent contamination of duct system.</li> <li>2. Complete all critical barriers i.e. sheet rock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins.</li> <li>3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</li> <li>4. Contain construction waste before transport in tightly covered containers.</li> <li>5. Cover transport receptacles or carts. Tape covering unless solid lid.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not remove barriers from work area until completed project is inspected by SAVAHCS Safety Officer and Infection Control Coordinator and thoroughly cleaned by Environmental Management Service.</li> <li>2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.</li> <li>3. Vacuum work area with HEPA filtered vacuums.</li> <li>4. Wet mop area with disinfectant.</li> <li>5. Remove isolation of HVAC system in areas where work is being performed.</li> </ol>

**Note:** Class of Precautions is the maximum level required. Construction Activity within a given project will vary dependent on construction phase i.e., excavation, demolition, early construction, end-stage construction. **Precautions required may vary** within a given project in accordance with type of current construction activity.

CLASS IV	1. Isolate HVAC system in area where work is being done to prevent contamination of duct system.	1. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction.
	2. Complete all critical barriers i.e. sheet rock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins.	2. Contain construction waste before transport in tightly covered containers.
	3. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.	3. Cover transport receptacles or carts. Tape covering unless solid lid.
	4. Seal holes, pipes, conduits, and punctures appropriately.	4. Vacuum work area with HEPA filtered vacuums.
	5. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site.	5. Wet mop area with disinfectant.
	6. All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.	6. Remove isolation of HVAC
	7. Do not remove barriers from work area until completed project is inspected SAVAHCS Safety Officer and Infection Control Coordinator and thoroughly cleaned by the Environmental Management Services.	

**Note:** Class of Precautions is the maximum level required . Construction Activity within a given project will vary dependent on construction phase i.e., excavation, demolition, early construction, end-stage construction. **Precautions required may vary** within a given project in accordance with type of current construction activity.

**Step 4. Identify the areas surrounding the project area, assessing potential impact.**

Unit Below	Unit Above	Lateral	Lateral	Behind	Front
NA	NA	GRC	GRC	GRC	GRC
Risk Group	Risk Group	Risk Group	Risk Group	Risk Group	Risk Group

**Step 5. Identify specific site of activity, e.g., patient rooms, medication room, etc.**

The project consists of the addition of two storage rooms and the remodel of the patient restroom to accommodate handicapped accessible showers. The storage rooms are to be added on the east and west sides of Building 60, accessed thru the existing congregate shower areas. The patient

showers are to be phased and will eventually remodel all patient bathrooms except for those in the dementia wing.

**Step 6. Identify issues related to: ventilation, plumbing, electrical, in terms of the occurrence of probable outages.**

The project will require minor HVAC, plumbing, electrical, and nurse call outages for tie-ins of the existing systems.

**Step 7. Identify containment measures using prior assessment. What type of barriers, e.g., solid wall barriers? Will HEPA filtration be required?** (Note: Renovation/construction area shall be isolated from the occupied areas during construction and shall be negative with respect to surrounding areas.)

The location of the barriers will depend upon the phasing of the project. Solid barriers and HEPA filtration will be required.

**Step 8. Consider potential risk of water damage. Is there a risk due to compromising structural integrity, e.g., wall, ceiling roof ?**

The risk is minimal for this renovation and addition.

**Step 9. Work hours: Can or will the work be done during non-patient care hours?**

NA. There are no non-patient hours.

**Step 10. Do plans allow for adequate number of isolation / negative airflow rooms?**

NA.

**Step 11. Do the plans allow for the required number & type of handwashing sinks?**

NA

**Step 12. Does the infection control staff agree with the minimum number of sinks for this project? (Verify with AIA Guidelines for types and area.)**

Yes

**Step 13. Does the infection control staff agree with the plans relative to clean and soiled utility rooms?**

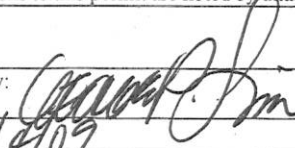
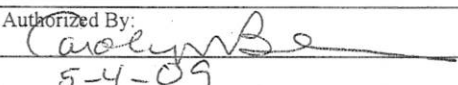
NA

**Step 14. Plan to discuss the following containment issues with the project team: traffic flow, housekeeping, debris removal (how and when).**

Traffic flow will be addressed when the project phasing is addressed. Construction debris is to be removed at the end of each work day in covered containers. The General Contractor will be held responsible for the housekeeping duties.

Appendix: Identify and communicate the responsibility for project monitoring that includes infection control concerns and risks. The ICRA may be modified throughout the project dependent on current project phase. Revisions must be communicated to the Project Manager.



<b>SAVAHCS Infection Control Construction Permit</b>					
Project: GRC Showers, Phase II, Building 60				Proj. No: 678-09-102	
Location of Construction: Building 60				Project Start Date: July 2009	
Project Coordinator/CR: George Sieu				Estimated Duration: 12 months	
Contractor Performing Work:				Permit Expiration Date: 07/10	
Supervisor:				Telephone:	
YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION CONTROL RISK GROUP
	X	TYPE A: Inspection, non-invasive activity		X	GROUP 1: Low Risk
	X	TYPE B: Small scale, short duration, moderate to high levels		X	GROUP 2: Medium Risk
	X	TYPE C: Activity generators moderate to high levels of dust, requires greater 1 work shift for completion		X	GROUP 3: Medium/High Risk
X		TYPE D: Major duration & construction activities requiring consecutive work shifts	X		GROUP 4: Highest Risk
CLASS I		1. Execute work by methods to minimize raising dust from construction operations. 2. Immediately replace any ceiling tile displaced for visual inspection.			
CLASS II		1. Provides active means to prevent airborne dust from dispersing into atmosphere. 2. Water mist work surfaces to control dust while cutting. 3. Seal unused doors with duct tape. 4. Block off and seal air vents. 5. Wipe surfaces with disinfectant.			
CLASS III		1. Obtain infection control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of the duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Do not remove barriers from work area until complete project is thoroughly cleaned by Environmental Management.			
Date Initial		6. Contain construction waste before transport in tightly covered containers. 7. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. 8. Place dust mat at entrance and exit. 9. Remove or isolate HVAC system in areas where work is being performed. 6. Vacuum work with HEPA filtered vacuums. 7. Wet mop with disinfectant. 8. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 9. Contain construction waste before transport in tightly covered containers. 10. Cover transport receptacles or carts. Tape covering. 11. Remove or isolate HVAC system in areas where work is being performed.			
CLASS IV		1. Obtain infection control permit before construction begins. 2. Isolate HVAC system in area where work is being done to prevent contamination of duct system. 3. Complete all critical barriers or implement control cube method before construction begins. 4. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. 5. Seal holes, pipes, conduits, and punctures appropriately. 6. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site.			
5/4/09 Date Initial		7. All personnel entering work site are required to wear shoe covers. 8. Do not remove barriers from work area until completed project is thoroughly cleaned by the Environmental Service Dept. 9. Vacuum work area with HEPA filtered vacuums. 10. Wet mop with disinfectant. 11. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 12. Contain construction waste before transport in tightly covered containers. 13. Cover transport receptacles or carts. Tape covering. 14. Remove or isolate HVAC system in areas where it is being done.			
Additional Requirements					
Exceptions/Additions to this permit are noted by attached memoranda.					
Date Initials					
Permit Request By: 			Permit Authorized By: 		
Date: 5/4/09			Date: 5-4-09		

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